3: Ray E-5 (1928-35) 1936 Plateau

132 ten inches or less may be classed as definitely arid, making for desert conditions.

Temperatures throughout the Columbia Basin are much more uniform, month for month, than precipitation. Characterizing the whole area, however, are extreme ranges from summer maximums to winter minimums. "The average annual range is between 40 and 50 degrees F. with winter temperatures about 20 to 30 degrees F. and summer temperatures from 65 to 80 degrees F. The extreme range for any one station is 140 degrees F. but temperatures as low as -36 degrees F. and as high as 115 degrees F. have been recorded at different stations. Temperatures as low as -20 degrees F. and as high as 100 degrees F. are common, but the cold and warm spells are of short duration and are not felt as much as the figures might indicate on account of the low humidity of the air."[10]

137 Four plant life zones, the Upper Sonoran, the Arid Transition, the Canadian and the Hudsonian, are represented in this area. Of these the first two are by far the most extensive and nearly all native villages were located in these zones. Hunting and gathering territories, however, extended into the Canadian and Hudsonian especially in peripheral regions. The Upper Sonoran is typical of the Columbia plains or lava plateau, while the Arid Transition characterizes the lower reaches of the surrounding mountains. Higher in the mountains is found the Canadian zone and more rarely the Hudsonian. The most conspicuous plant of the Upper Sonoran in this region is the sagebrush *(Artemisia tridentata)*. Other prominent plants include rabbit brush *(Chrysothamnus nauseosus)*, antelope brush *(Purshia tridentata)* and dragon sagewort *(Artemisia dracunculus)*. The Arid Transition zone is divided into two subareas. The lower is characterized by bunchgrass *(Agropyron spicatum)* and often called the bunchgrass prairies. The upper division is typified by the presence of yellow pine *(Pinus ponderosa)* forests. The bunchgrass prairies occupy narrow marginal strips near the mountains and shade into the pine forests as soon as the elevation becomes noticeable. The Cana-

[10]Saunders, 321.

3: Ray E-5 (1928-35) 1936 Plateau

dian zone is marked by the presence of the Engelmann spruce *(Picea engelmanni)* and the western larch *(Larix occidentalis)*. In the Hudsonian, highest of timbered plant zones, may be seen the white bark pine *(Pinus albicaulis)* and the subalpine fir *(Abies lasiocarpa)*."

III.

The linguistic stocks represented among the Columbia Basin groups here considered are Salish and Sahaptin. The term Interior Salish is applied to the division of the former lying east of the Cascade mountains. Roughly the northern half of the Basin is occupied by Salish-speaking peoples while the southern half is Sahaptin in speech. Specifically the Salish include the Lakes, Kalispel, Coeur d'Alene, Spokanes, Colville, Chewelah, Sanpoil, Nespelem, Southern Okanogan, Methow, Chelan, Wenatchi and Columbia. The Sahaptin are represented by the Kittitas, Yakima, Klikitat, Wayampam, Umatilla, Cayuse, Walula, Wanapam, Wauyukma, Palus and the adjacent Nez Perce. It was formerly thought that Cayuse, together with Molale in and west of the Oregon Cascades, represented a distinct linguistic stock, the so-called Waiilatpuan. Dr. Melville Jacobs recently has shown this to be merely a widely divergent dialect of Sahaptin.[12]

Interior Salish has been studied systematically only by Dr. Gladys Reichard, whose work is not yet available, but native classifications serve to indicate the major subgroups. Dialects within each of these subgroups are mutually intelligible but are unintelligible to other groups. Comprising one group are the Lakes, Colville, Lower Spokane, Sanpoil, Nespelem and Southern Okanogan; another, the Columbia, Chelan, Methow and Wenatchi; a third, the Chewelah, Kalispel, Upper Spokane and Middle Spokane; and a fourth, the Coeur d'Alene.

[11] Charles V. Piper, "Flora of the State of Washington," in *Contributions from the U.S. Herbarium* (Washington, 1906), XI, 33-72.

[12] Melville Jacobs, "A Sketch of Northern Sahaptin Grammar," in *University of Washington Publications in Anthropology* (Seattle, 1931), IV, 93-96.